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MARKETING ACTIVITIES

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What's Ahead for Broilers?

By Roy W. Lennartson

The tremendous growth of the U.S. commercial broiler industry since mid-1930 has had three fundamental causes. One is the increase in human population. Another is an increase in poultry meat consumption per person. The third is the increased efficiency of our laying hen. Of these causes, the increased efficiency of the laying hen has been the main one. This was discovered when the Production and Marketing Administration recently dug into the figures in order to foresee what prospects there were for continued expansion of the broiler industry.

Because the laying hen has become increasingly efficient, fewer hens are producing the eggs we need. As a result, relatively fewer chicks need be raised for flock replacement, and relatively fewer hens are culled from laying flocks and marketed as meat.

Fifteen years ago the average hen laid 118 eggs a year. Nowadays she lays 160 a year--an increase of 35 percent. In 1948, if we had had to depend on the inefficient 1934-model hen for the eggs we produced, we would have required a laying flock of 620 million hens. Actually, in 1948, we had 428 million hens.

Broilers Fill the Gap

In moving to fill the gap left by reduced marketing from farm flocks, increased population, and increased per capita demand, the commercial broiler industry has not been backward. It has been aggressive in expansion, in production practices, in seeking new markets, in developing new techniques, and in gaining consumer acceptance for its products.

Of recent years the broiler industry has been favored in its growth by a very high level of purchasing power and shortages of competing foods. But these favorable conditions cannot be expected to last always. Red meat supplies are still relatively short, but we can foresee increasing supplies. The current high level of consumer purchasing power is considered by many to be the peak.

In 1945 there was a peak broiler production of 346 million head. In 1946 the number fell to 276 million head, but picked up again in 1947 to reach 283 million head. Now that feeds are again in plentiful supply and at relatively favorable prices, the broiler industry is again expanding rapidly. The 1948 production is estimated at 340 million head--10 times that of 1934. Most everyone will agree that production in 1949 probably will exceed the 340 million produced in 1948, and the 346 million peak of 1945.

New production areas are developing rapidly all over the country. Sooner or later, if production in the new areas continues to increase, local markets will become satisfied and producers will begin to compete in one another's markets. Already, for example, many carloads of eastern broilers have been shipped to the Midwest. Some have been reshipped as far as the west coast, and a few have even been returned to east coast cities, such as New York, in frozen eviscerated form. This type of uneconomical rehandling would rapidly disappear if local production increased substantially. The next step, as production increased further, would be for Midwest-produced birds to move to the east coast and begin competing for markets.

So much for the gloomy side of broiler prospects. The encouraging side is that all signs point to a continuing growth of the industry--for at least two reasons. First, the primary factor responsible for the industry's past growth--the increase in the number of eggs produced per hen each year--will continue for a number of years to come. Second, our total population is continuing to increase each year.

PMA Studies Long-Range Problems

The objective of the PMA study was to estimate how many broilers would be needed 10 years from now.

The first factor considered was the phenomenal increase in the rate of lay per hen. In 1930 the average hen laid about 120 eggs per year. In 1940 the rate was 135 eggs. In 1948 it was about 160 eggs. The long-time average increase in the rate of lay per bird has amounted to about 2.5 eggs per year. USDA production specialists see no reason why this increase should not continue for some years to come.

The second factor is population growth. It is not unlikely that the rate of increase will slow down to something in the neighborhood of a million a year. This is the rate used in the study.

Another important factor considered in the PMA study is the ratio of hens to pullets in laying flocks. It has been demonstrated that all-pullet flocks are more profitable than mixed pullet-hen flocks. On January 1, 1935, 60 percent of the layers on farms were pullets; the rest were hens. Thirteen years later, on January 1, 1948, the percentage of pullets had increased to 67--nearly half a bird a year.

Naturally, as the ratio of pullets to hens increases, a relatively larger number of chickens must be raised, because more birds are needed for flock replacement. This will mean more chicken meat from farm production. But this increase is more than offset by the other factors tending to decrease farm meat production. USDA production specialists say that the ratio of pullets to hens will continue to increase. In this study it was assumed that there would be an annual increase in the percentage of pullets in the laying flock as of January 1 of four-tenths of 1 percent.

Still another important factor bearing on future broiler production

is the number of chickens that must be raised before one pullet can be added to the laying flock. The increase in the practice of sexing has reduced the number of chickens that need to be raised to replace one pullet in the laying flock. In 1931 it was necessary to raise 3.1 chickens in order to place one pullet in the laying flock on January 1, 1932. In 1947, only 2.6 chickens were needed. This relatively small decrease makes a big difference in the number of young farm chickens available as meat. There is no reason why this decrease should not continue for a number of years. In the PMA study, the downward trend was followed until it reached 2.25.

Several other factors, although less important, had to be considered in the study. First was mortality. For several years there had been no pronounced trend, up or down, in the mortality rate of farm chickens. So 17.5 percent, the rate during the last 5 years, was used.

Another minor but necessary factor was average live weight. The average live weight of young chickens sold from farms has increased slightly during the last 12 years. During the last 5 years the average weight has been 3.6 pounds. This figure was used, rather than the trend figure, since the over-all increase during the last 12 years was less than half a pound. The average weight of hens sold has also increased during the last few years, but the increase has been negligible. Hence, the average for the last 5 years, or 5.2 pounds, was used.

Egg Consumption Considered

Now, two other assumptions had to be made before there could be any estimate of the amount of farm poultry meat available in the future. The first was as to the probable consumption of eggs in the coming years. The average prewar per capita consumption of eggs was 298. In 1948, an estimated 382 eggs per capita were consumed. During the last 5 years the average consumption was about 375. For many years a goal of 365 eggs--"an egg a day"--has been accepted as nutritionally desirable. This level was greatly exceeded during the war and has been consistently exceeded since, owing largely to the shortage of red meats. But as the supply of red meats increases, the per capita consumption of eggs is likely to decrease. Therefore, as a reasonable level of egg consumption in the next 10 years, the old goal of 365 eggs per capita was used in the study.

The second assumption was as to the future per capita consumption of chicken meat. The pre-war average was about 17.9 pounds. In 1948 it was about 22.5 pounds--which was low compared with the previous 5-year average of 25.4 pounds, owing to a very short crop of farm chickens. For the purposes of the PMA study, a consumption of 23 pounds per capita was assumed.

These facts provide a basis for estimating the probable production of farm chicken meat 10 years from now. From this estimate we can compute the number of broilers necessary to give any desired level of poultry meat consumption--in this case, 23 pounds per capita.

Chart I shows the results of these calculations. In 1936, commercial broiler production amounted to about 53 million head (134 million pounds dressed weight). In 1945, a peak of 346 million head (919 million pounds) was reached. In 1960, if the assumptions as to rate of lay and other factors are correct, 572 million head (1,510 million pounds) will be produced.

Chart II shows what part of the total poultry meat consumption for the years 1936 to 1948 was represented by commercial broilers, young farm chickens, and hens. It also shows what these percentages might be over the next 10 years, if the production assumptions are correct. Of the total chicken meat consumed in 1944, for example, 18 percent came from commercial broilers, 34 percent from farm-produced young chickens, and the remaining 48 percent from hens.

In 1936, when the broiler industry was small, only 6 percent of the poultry meat consumed came from commercial broilers, 50 percent came from young farm chickens, and 44 percent from hens. In 1947, 11 years later, broilers had increased to 22 percent, whereas young farm chickens had fallen to 38 percent and hens to 40 percent. The important point is that commercial broilers have about made up for the reduced output of young farm chickens. In other words, consumption of all young chickens, including broilers, has not increased materially in relation to hen consumption. But the percentage of broiler consumption to total poultry consumption has increased very substantially.

Proportion of Broilers Expected To Increase

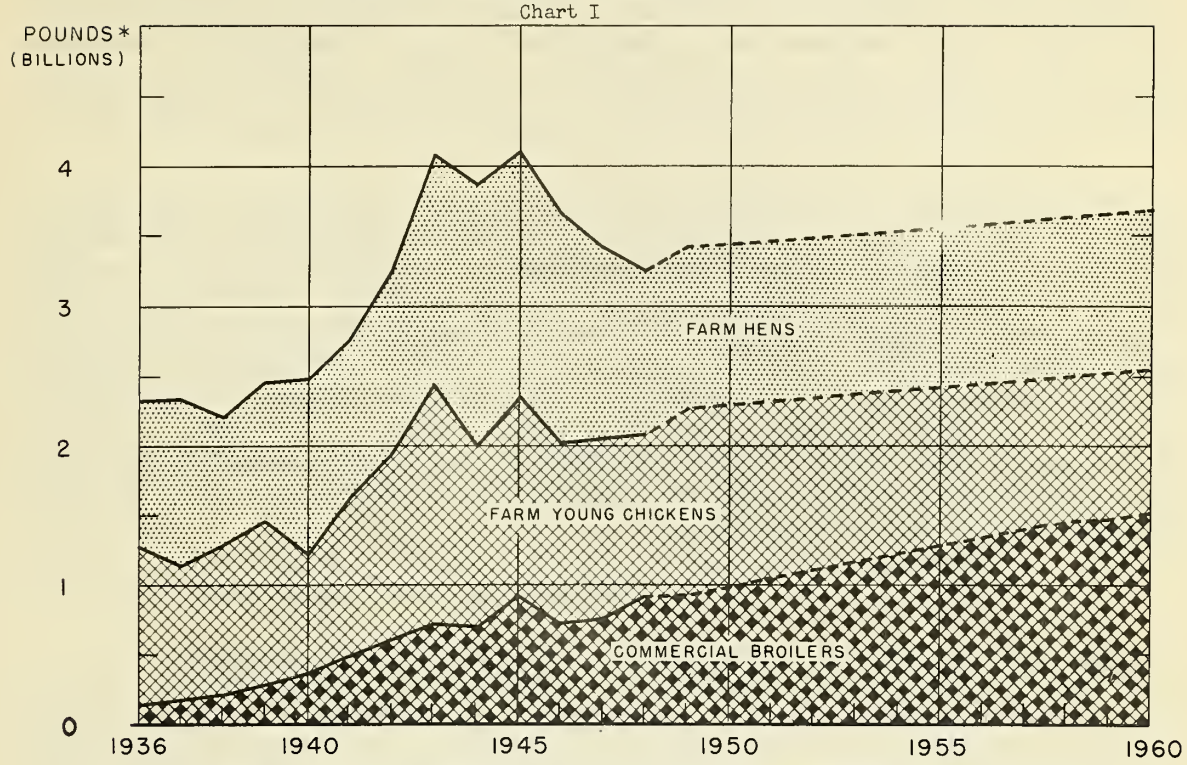
If we extended these lines, based on the results of the study, to 1960, we might expect that 41 percent of the poultry meat consumption would be from broilers, and only 28 percent from young farm chickens and 31 percent from hens. The slope of the line representing total young chickens between 1936 and 1948 is similar to the slope of the line for later years, although it shows a considerably smaller percentage of total young chickens. This can be accounted for by the very large production of eggs, a substantial number of which were being purchased by the Government for lend-lease and support operations beginning in 1940.

In time, producers in any section are sure to be faced with ever-increasing competition from other production areas. Whether producers in certain localities survive depends on the leadership in certain essentials.

The first essential is the gearing of marketing to demand. Here two factors are involved--production planning on the farm, and regulating marketing of the processed product to avoid market gluts. When marketings exceed demand at profitable prices, prices fall seriously, frequently more than the surplus warrants. When supplies are short relative to demand, prices go up out of reason. No one group in the industry can be blamed for this situation. The industry will probably never be able to eliminate these ups and downs completely, certainly as concerns production, but much can be done to stabilize prices by gearing the movement into consumer channels according to demand.

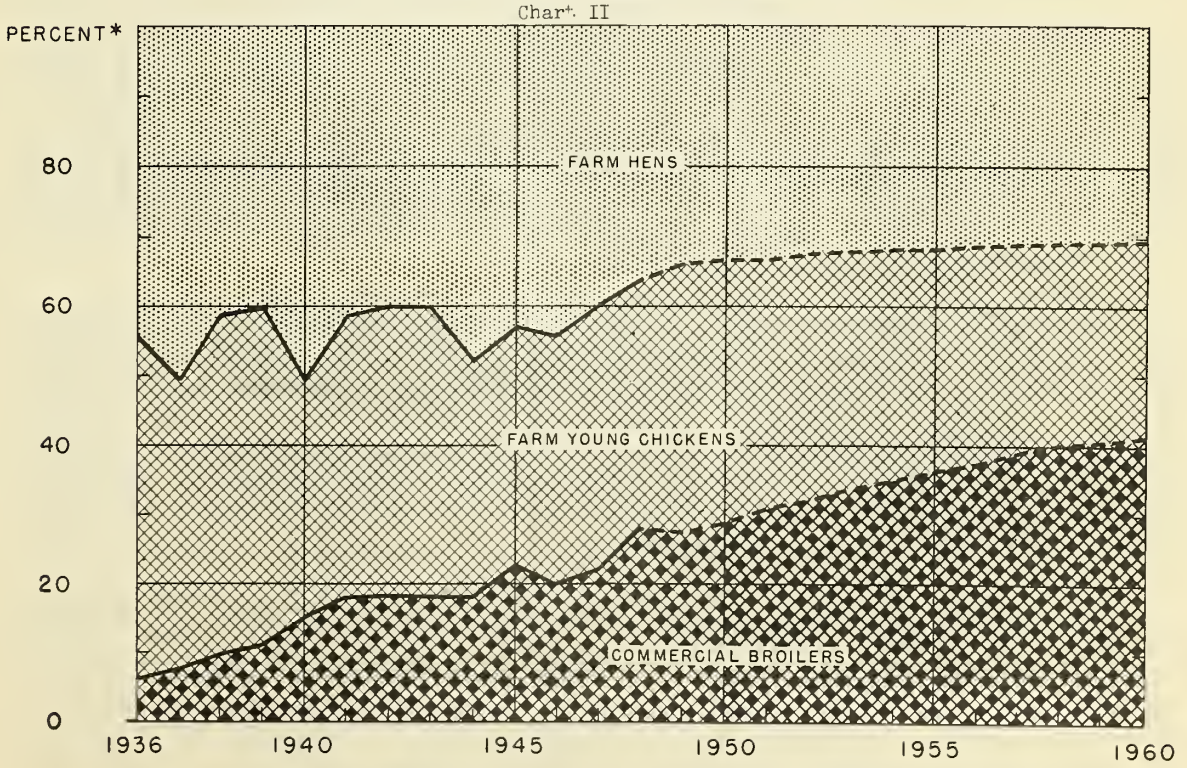
CHICKEN MEAT: CONSUMPTION, BY TYPES, 1936-48 AND ESTIMATED 1949-60

Chart I



CHICKEN MEAT: PERCENTAGE OF TOTAL CONSUMPTION, BY TYPES, 1936-48 AND ESTIMATED 1949-60

Chart II



*DRESSED WEIGHT BASIS DATA FOR 1948 ARE PRELIMINARY

So long as our only facilities are those for preparing ice-packed birds, the problem of widely fluctuating prices will be with us. What we need are facilities for freezing, storing, eviscerating, and packaging in various ways. We need these facilities to take advantage of all market outlets, and to open up new markets. Market demands are shifting. Those who recognize this, and lead in its development, can hope to survive and expand in the years to come.

The processor is only one cog in this great industry. Situated between producers and consumers, he performs functions that are all important as concerns quality, cost, and price. He must be even more conscious of processing costs and be quick to make improvements. The hatcheryman must work closely with the breeder to improve hatchability and disease control. Hatching eggs must be made available when they are needed and according to the demand. The breeder must be increasingly conscious of what consumers want, and breed toward that end. The feed manufacturer must put research to work to make even better feeds. And the producer must work harder at lowering his production costs, if total consumption is to be increased.

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FEDERAL MEAT GRADES NOW INCLUDE VEAL AND CALF IDENTIFICATION

To broaden its service to consumers, the Federal meat grading service is now marking calf and veal by name along with the grade stamp on federally graded meat. Previously these two meat classes were graded and stamped for grade but not for class.

While both veal and calf are popular because they come in small tender cuts which may be prepared readily, some homemakers have shown definite preference for one or the other. This step of the grading service is aimed at helping them differentiate between the two classes of meat. Class identification, along with the grade name, will furnish consumers and others an added guide with which to select the meat of their choice, the Livestock Branch, Production and Marketing Administration, U. S. Department of Agriculture points out.

During the war years when meat grading was compulsory, millions of the household consumers and many meat handlers were given their first opportunity to purchase meat graded by a nation-wide standard. This has greatly increased consumers' interest in meat quality and in other meat differences such as the distinction between veal and calf. This prompted the Livestock Branch to include veal and calf identification which is helping to establish a basis of uniformity in trading of these two meats between the supplier and the consumer.

Veal comes from very young animals usually less than 14 weeks of age and is produced principally on milk or milk substitutes. It is usually fine in texture and has a light pinkish-brown color. Calf is from animals that have passed beyond the veal state in age but have not yet acquired the typical beef characteristics. Compared to veal, the flesh of calf is firmer, coarser in texture, deeper red in color and the fat is usually whiter.

Winter Pears - A Marketing Puzzle

By M. E. McGaha and Norman Hummon

The American people are missing a treat.

There's a delicious fruit that is plentiful right in the winter time when many fruits are scarce. It is moderately priced and downright luscious. But many people are not eating it.

That fruit is the winter pear--a European-developed delicacy that has been produced in volume in this country for about fifteen years. Winter pears are not selling well, either in this country or for export.

The reason: In the United States far too many of these pears have been placed on retail shelves in a form as green and firm and hard as an acorn squash. And, unfortunately, at that stage winter pears usually taste something like uncooked squashes. One result, naturally, is that the winter pear industry is in trouble.

The Department of Agriculture is looking for the answer to this problem of the producer, the consumer and the trade. The Fruit and Vegetable Branch, Production and Marketing Administration, is making a study under the Research and Marketing Act of 1946 to appraise marketing methods designed to result in larger sales. And meanwhile, the Department is helping the industry to divert some of its product to areas that normally consume little or no winter pears.

Good Pears Are Ripe Pears

Behind the industry's problem is this question: When is a winter pear ready for the retail market--when it is green and hard and will bear a lot of handling (and probably will fail to please most customers), or when it has been ripened and is ready to eat?

Patient purchasers can lay aside the green fruit for a ripening period, and the juicy sweetness of the pear pays them well for the delay. But the average consumer is an impatient consumer when it comes to the food he buys, and he dislikes the processing delay.

The winter pear itself is a bit particular about its ripening habits. All of the important varieties--the Anjou, the Bosc, the Comice--are most delicious and attractive when they are ripened or "conditioned" under rather exacting temperature and humidity control. Consumers, of course, do not have the time or inclination to condition pears; and shipping, wholesaling, and retailing agencies have been reluctant to initiate the practice.

As a result, many domestic consumers have shied away from a food

that would add a European touch for fruit- and salad-appetites, often too narrow in their scope. Generally this would not be a costly dietary addition either, for during this last season, winter pears at two pounds for a quarter were no more expensive than choice apples.

Before 1941, 30 to 45 percent of the U. S. winter pear crop had been exported to the pear-loving countries of Europe. During the war, however, exports of fresh fruits practically ceased, and since the war a lack of dollar exchange in the European countries has made the pear industry dubious of recovering this market in the near future. The pear industry, of necessity, has had to call for assistance.

The Department of Agriculture's Production and Marketing Administration is aiding the industry in its attempts to broaden market outlets by paying shippers a "diversion benefit" of 45 cents a box for pears sold and delivered to markets in 18 States in the central and southern parts of the country. In these States, consumption of winter pears is low compared to that in the northeastern States. In addition, for pears from the 1948 crop, like payments are being made for pears sold and exported to countries participating in the European Recovery Program.

However, the reluctance of winter pears to round into proper condition is a handicap that no diversion program can overcome completely. This is a handicap the pear industry recognizes.

Pear Conditioning Stressed

This past marketing season found the industry intensifying its whole marketing program for the slightly-over-average 1948 crop of nearly 6 million boxes. Its frontal attack in the campaign had a double objective: To demonstrate to all phases of the industry the essential nature of the "conditioning" process, and at the same time to make the consuming public more winter-pear-conscious.

In addition to determining the importance of conditioning before the consumer buys, efforts were made to find out which segment of the trade was best suited to perform the process. During the marketing season the U. S. Department of Agriculture cooperated with the industry in the program and conducted work in three consuming centers.

Field work in these studies has now been completed in three locations: the Washington, D. C.; the Canton-Akron, Ohio; and the Charlotte, N. C., marketing areas, chosen because they were the areas in which the industry was concentrating its promotion efforts.

The project was carried out in the following manner: In each of the three areas mentioned, 9 retail stores, cooperating in the industry's promotion program, were selected by the Department as the basis of an experiment. As nearly as possible an equal number of the stores were located in high, medium, and low income districts in the areas chosen. In an effort to determine the effectiveness of the industry's promotion efforts, three of the stores in each area received a demonstration sponsored by the Oregon-Washington-California Pear Bureau, plus posters and other display material, and in addition began selling ripe pears after

the first week. The other six stores served as check stores. Three of these six used display material. The three remaining stores continued selling pears in their usual manner. The essence of the demonstration was to give each customer in the produce department a sample slice of a properly ripened pear.

During the promotion work wholesalers and retailers were shown in detail how to perform the conditioning accurately, and retailers were encouraged to stock pre-ripened pears. The ripening habits of each of the important varieties were explained first-hand--how most of the pears remain firm and green for 2-4 months after picking when stored at temperatures around 30 degrees, and how the starches change to sugar rapidly when the core temperature of the fruit is brought up to 65°F. at about 75 percent humidity.

Retailers and wholesalers learned that as the pears were needed they could be conditioned by subjecting them to room temperature in an atmosphere of high humidity for 36 to 48 hours, or until the pears yielded to a slight thumb pressure at the stem end. At this stage the important varieties were "breaking" or "on the turn," but once they were again placed in a cool room, their condition still allowed a week to 10 days for the marketing period.

During the 6 weeks of the experiment, Department of Agriculture personnel observed the sale of 40,000 pounds, or approximately 910 boxes of 44 pounds each, in 27 stores in the three areas. The results of the study are now being tabulated. A report will be issued later.

Winter pears are now produced principally in the three Pacific States where the climate and soil conditions closely resemble the native lands of the fruit--France, Belgium, and England. Winter pears have long been one of the staple fruits of Europe, though here they were often little known outside their area of production.

The industry has been well aware of the relative obscurity of its product. This was strikingly demonstrated by a man-on-the-street recognition quiz conducted by the Pear Bureau several years ago in New York City. Of the first 1000 pedestrians quizzed as to the meaning of the word "Bosc," over 900 thought it was a German soldier, 75 or more had no answer, three or four thought it was a type of processed milk and only one knew it for the delicious fruit it is.

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TEST FOR FOOD FLAVORS SOUGHT

How does it taste? That's the first question asked by a consumer when a new food product comes on the market. Just as eager to find the answer are food processors and food scientists at the New York State Experiment Station at Geneva. They find that preference for the new product by at least 75 percent of a large group of "test" consumers is usually required before a new product should be introduced. A recent report by Professor J. C. Hening outlines the new food testing techniques of the Geneva food research laboratories.

Do's and Don't's for the Produce Trade

By T. C. Curry

Law enforcement officials have compiled a splendid record when it comes to recovering stolen automobiles. But the prudent motorist still locks the ignition and the doors whenever he parks. He knows that the police sometimes fail and that even if the car is recovered, he will be put to considerable inconvenience.

Similarly, the Perishable Agricultural Commodities Act has done much to bring about honest dealing in the buying and selling of fresh fruits and vegetables. During the calendar year 1948, the Department of Agriculture's Production and Marketing Administration, through its Fruit and Vegetable Branch settled under authority of the act, 1,148 cases involving payments totaling $1,133,452.39. But many of these cases would never have reached the dispute stage if buyers and sellers had, figuratively speaking, locked the car.

The precautions that should be taken by anybody dealing in perishables are many and all of them can't be listed on these pages. But here are a few of the more important "do's" and "don't's":

Be contract wise.

In the first place, anyone new or old in the business should be sure that the contract is a valid and binding one--and clearly provable as such. A contract may be defined as an agreement between two or more parties to do certain things. In order to make an enforceable contract there must be a complete meeting of the minds on all essential specifications. All parties to a contract must agree to the same terms and specifications describing the commodity and the terms of sale. In the absence of an agreement to the contrary, the seller is within his rights in billing the shipment "order notify" or "advise" in order to insure payment before acceptance of the goods. On the other hand, open billing might prove to be an embarrassing and costly situation for the seller in the case of insolvency on the part of the buyer.

Be explicit.

It is highly important to use descriptive terms which have definite, generally understood meanings. Stipulations that are understandable are also enforceable. Avoid the use of such terms as "beautiful,""good color," "good quality," "best" and so forth. There are no established standards for the determination of the meanings of these terms. Those in charge of enforcement of the PACA generally find that the seller is inclined to undervalue and the buyer overvalue the meaning of these terms. Misunderstandings may be avoided if contracts are made on the basis of U.S. Standards established by the Department, and these are inclusive enough to furnish a satisfactory basis for wholesale trading.

Stick to the contract.

Since contracts obligate as well as protect, it is necessary that licensees deliver goods meeting all specifications of the contract. Careful compliance with terms of contracts serves as inexpensive assurance of a good business reputation--and good business. Enforcement of contract provisions is one of the more important objectives of the PACA.

Know business reputations.

Under the act all commission merchants, dealers and brokers handling fruits and vegetables in interstate or foreign commerce are required to be licensed, but it is still important to the tradesman to know that he is dealing with a reputable firm. Holding a license under the PACA does not guarantee that the party is reliable. Licenses can be denied only in rare instances, such as when it is found, after formal hearing, that the applicant is unfit to engage in the business. Accordingly it is wise to investigate the ethical and financial reputation of unknown individuals and firms through one of the well recognized commercial credit rating agencies. Similar information may often be obtained through banks, better business bureaus and chambers of commerce.

Handle quality products.

One of the significant truths turned up in the years PACA has been in force has been that good quality creates business and poor quality destroys it. Generally, with fresh fruits and vegetables inferior quality increases risk and cuts down profits and the range of outlets. In the produce channels it tends to act as a deterrent to trading and it increases the incident of complaint under the act.

Among those responsible for the Administration of the law, the feeling on this quality issue is so strong that it probably should also be stated as the first of the "don't's" to the trade.

Don't take a gamble on low grade or inferior produce.

With the return of the buyer's market, quality will mean even more in transactions of fresh fruits and vegetables. Consumers have good memories and with increasing volumes of produce on the market they will be able to trade more and more where they are pleased, rather than simply where they have been able to obtain produce.

Don't take checks from strangers.

During PACA's existence, scarcely a day has passed without its complaint against bad check artists.

Don't extend too much credit.

The wholesale business is a fast moving trade, often temporary and seasonal in duration. The act has largely restricted the activities of fly-by-nighters in the trade but over-extension of credit leads to de-

fault of payment. Of a total of over 41,000 complaints received since 1930 over 50 percent have alleged failure truly and correctly to account and pay for either consigned or purchased goods.

Don't deal with chronic kickers.

In the wholesaling industry a few individuals have gained themselves the reputation of being constant kickers because of their steady complaints against all produce, regardless of its quality. Generally, these complaints have only nuisance value but unnecessary headaches ought to be avoided in any business.

Don't hesitate to report a violation.

Finally, it is extremely important that defaults of contract, fraudulent practices and other violations be reported without delay. Contact may be made with the Washington, D. C. Regulatory Division office through a direct Washington wire. (Phone REpublic 4118) PACA regional offices may be contacted in New York City, Chicago, Fort Worth, and Los Angeles.

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TREE-RIPENED PRE-PACKAGED PEACHES HAVE INCREASED CONSUMER APPEAL

Farm pre-packaging of peaches--after they have gained their tree-ripened flavor and before they have been bruised in bulk handling--can bring Louisiana peach growers additional profits and larger markets the L.S.U. Agricultural Experiment Station says.

"Pre-packaged, tree-ripened peaches outsold three to two the same kind of fruit displayed in an open bin even when the packaged variety cost one cent a pound more," J. M. Baker, marketing specialist of the station, said in a bulletin entitled "Pre-packaging Tree-ripened Louisiana Peaches" recently published by the Experiment Station. The bulletin covers marketing experiments conducted cooperatively with producers and retailers in the 1947 and 1948 seasons.

"The object of the 1948 experiment was to learn whether tree-ripened peaches could be packaged at the farm in North Louisiana and transported 400 miles in a refrigerated truck to stores in Baton Rouge and New Orleans and arrive in acceptable condition," Prof. Baker said. "We already knew they could be pre-packaged successfully in retail stores."

The fruit was packaged in eight- and six-peach boxes with a transparent window through which consumers could see the peaches. A total of 1,702 two-pound packages shipped during the season arrived at the retail store in highly satisfactory condition with an average loss of only one peach out of 189. The general quality of the fruit was unusually well preserved and housewives liked the finer flavor, freedom from injury and better keeping traits of the pre-packaged fruit.

Oklahoma Marketing Returns Increased By RMA Work

By Leighton G. Foster

Major agricultural marketing advances were made last year in Oklahoma as a result of work being conducted under the Marketing Service Provisions of the Research and Marketing Act of 1946.

Many farmers are getting a better return on their eggs. Fruit and vegetable growers are being helped by marketing specialists and a specialized market information service.

A program to establish State grades and standards for grass and legume seed has been started. A method for reclaiming pink bollworm-infested cottonseed for planting aided growers. Farmers were assisted in treating diseased peanut seed so that it could be planted safely.

The Oklahoma State Board of Agriculture recently reported these achievements. The work is being carried out by the board with State and Federal funds, in cooperation with the Production and Marketing Administration, U. S. Department of Agriculture.

The Agricultural Extension Service, Agricultural Experiment Station, Soil Conservation Service, State Seed Laboratory, wholesalers, retailers, chambers of commerce and farm organizations have helped to make the program function smoothly.

Here are the details of the accomplishments in Oklahoma:

Eggs Sold on Quality Basis

Until the State began a marketing program this year, eggs and poultry were sold with little regard for quality standards. As a result, Oklahoma eggs and poultry have been discounted on the markets.

In 1947 the Oklahoma State Legislature passed a voluntary candling and grading law. Last year under the RMA program, the State was divided into eight districts, and a poultry and egg marketing specialist was appointed for each of the areas. Candling and grading procedures were demonstrated. Folders, posters, newspapers and radio programs were used to advance good marketing techniques.

Pamphlets outlining the advantages of purchasing graded eggs were distributed to consumers.

There is much evidence of the success of the program. Although

candling and grading are voluntary, a fourth of the State's egg production already is being graded and candled. Participating producers are getting a premium over non-participants.

Fruit and Vegetable Marketing Aided

Little fruit and vegetable marketing information was available to Oklahoma farmers when this program began. Often some shipping points had too much produce while some receiving points had too little.

Under the project the posting of daily price quotations and summaries of market conditions was started at all shipping points, large and small.

Marketing specialists were stationed at the shipping places. These men advised farmers concerning the best time to harvest, the correct handling, packing and loading procedures and helped to find the best outlets.

In addition, the specialists furnished grade labels at cost and supervised the labeling process.

The work on watermelons was especially successful. A million melons were graded and labeled. The melons were followed through marketing channels in northern and eastern States. It was found that these Oklahoma melons were among the best received in the terminal markets that were studied.

Seed Standards Established

Oklahoma has started work on the establishment of State grades and standards for native grass and small-seeded legumes. There are no Federal grades for the grass and legumes.

The work involves the setting up of methods for determination of the percentage of different types of seeds in one lot and for germination tests for each kind of seed.

It is believed that if seed grades and standards are established, farmers will be encouraged to plant more grass and legumes. The farmers will be assured, through the grades and standards program, of getting good seed.

Damaged Cottonseed Reclaimed

Farmers were aided in applying a method for reclaiming cottonseed that was damaged by pink bollworm. Pink bollworm broke out in eight cotton-producing counties in southwestern Oklahoma.

The work was in the nature of a pilot study on the reclamation of cottonseed for planting. Cottonseed moved from the infested area had

to be heat-treated before it could be sold. So samples of all cotton-seed from the bollworm counties were tested for germination before and after the 150-degree heat treatments. Then tests were needed to learn whether this heat-treated seed would germinate properly and be suitable for marketing.

Through the germination tests, producers were able to find out what seeds from the area were satisfactory for planting. When bollworms infest areas in the future, the methods for testing seed germination that were found to be successful in the RMA project can be used to solve the problem of the damaged seed.

Peanut Seed Treated

A method for treating peanut seed unsuitable for planting, to make it usable, was developed under the program.

Tests showed that much low quality seed could be made suitable for planting by treatment with mercuric dust. Farmers and peanut shellers were assisted in determining standard methods of treating seed. As a result the supply of planting seed was greatly increased.

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MARKETING OF PREPACKAGED APPLES STUDIED:

The advantages and disadvantages of marketing apples in consumer-size packages are being studied in a large-scale Federal-State project that got under way recently. The over-all objective of the work is to increase the salability of apples and the efficiency of marketing them.

The study is being carried out with the assistance of shippers, distributors and retailers as well as producers. Cooperating agencies are the Washington State Apple Commission, the Washington Agricultural Experiment Station, and the Marketing Research Branch of the Production and Marketing Administration, U. S. Department of Agriculture. The work is being done under the Research and Marketing Act of 1946 and was recommended by the RMA Deciduous Fruit Advisory Committee.

Transparent Film Bags Compared

Since late December, 52 carloads of Winesap apples have been shipped from Washington State to 21 cities in all sections of the country. Additional carloads are being shipped this month. Of the 52 carloads, the equivalent of 30 carloads were prepackaged in 4- and 5-pound flexible transparent film bags. The rest of the apples were shipped in wooden boxes which have been the standard containers for northwestern apples for several years. In most instances, each car had some of both types of containers. Cost and salability studies also are being made on commercial shipments of Washington Apples packed in open-faced cartons and mesh bags. Through a postcard questionnaire consumers are asked to indicate what they believe are the good and bad features of the package they purchased.

USDA Develops Potent Insecticide

By E. O. Umsted

New pyrethrum-like chemicals that kill insects have been made synthetically for the first time, USDA announced in March. The chemical make-up of the synthetic materials is almost identical with that of the insect-killing principle of pyrethrum. This remarkable development, comparable to the synthesis of rubber, is the culmination of intensive studies during the last 15 years by chemist F. B. LaForge and his associates of the Bureau of Entomology and Plant Quarantine.

One of the compounds was found to be six times as toxic to house flies as the combined toxic principles of pyrethrum flowers.

The discovery may be the beginning of a way, through chemistry, of providing new insecticides of wide importance. But much must be done before enough of the material can be produced to appraise its usefulness fully, and much must be learned in order to determine whether it can be produced commercially.

Pyrethrum, one of the most useful insecticides, is obtained by grinding the flower heads of a plant belonging to the same botanical family as chrysanthemums. Both the finely ground flowers, known as insect powder, and oil extracts of the flower are used to kill insects.

Pyrethrum Imports Declining

This plant grows in widely separated parts of the world. The most important commercial source of pyrethrum before the war was Japan. In recent years our imports have come chiefly from Kenya Colony and the Belgian Congo. Up to 20 million pounds of pyrethrum flowers have been imported into the United States in a single year. But in recent years imports have been considerably less owing to the high cost of the material as compared with that of recently developed synthetic organic insecticides that have appeared on the American market.

Pyrethrum has been used widely as a household insecticide and for control of a number of important agricultural insect pests. During the war practically all pyrethrum went into insecticides furnished the armed services because of its remarkable effectiveness against disease-carrying insects. It was the principal insect killer in the 35 million aerosol bombs which helped protect our armed forces from malaria and other insect-carried diseases. An important property of this insecticide is its so-called rapid "knock down" or paralyzing effect on insects. One of its chief advantages lies in the fact that it may be used with safety on agricultural crops, in food establishments, dairy barns, and households.

About 2 years ago the structure of the toxic chemical in pyrethrum

became known with certainty. It had taken 13 years of intensive effort to reach this point. Now, after two more years of intensive laboratory study by LaForge, M. S. Schechter, and their associates, the component parts have been reassembled in proper order to make a chemical with insecticidal properties.

Preliminary tests with some of the new pyrethrum-like materials indicate that they are at least as effective as the pyrethrum materials of plant origin. They have the same desirable quality of quick knock down action. The chemical make-up of the synthetic materials indicates that they will not break down and lose their insect-killing value as quickly as the natural material. Moreover, it appears that the toxicity to higher animals will be found to be about as low as that of the plant product.

Applications for patents to protect the invention have been filed and a brief note outlining the method of synthesizing these compounds will be published in an early number of the Journal of the American Chemical Society. A detailed description of all syntheses will be published later.

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HIGH MARKETING COSTS INDICATED BY STUDY OF TOMATOES GROWN IN SOUTH CAROLINA AND SOLD IN NEW YORK CITY

Tomato producers in South Carolina, marketing their crop in the New York area, received 31.3 cents of the consumer's dollar spent for these tomatoes in June 1948. Marketing charges accounted for the other 68.7 cents of the tomato dollar.

These figures are presented in a recent report "Marketing South Carolina Tomatoes in New York City," made jointly by the South Carolina Agricultural Experiment Station and the Bureau of Agricultural Economics, U. S. Department of Agriculture. The study was made with Research and Marketing Act funds.

Tomato growers in the State, it is shown, received an average of $1.68 per 30-pound lug of green-wrapped tomatoes, and marketing charges added another $3.71 to this amount by the time the crop reached consumers. The average retail price for tomatoes in New York City, going to market through the channels studied was $5.39 per lug.

Of the 68.7 cents of marketing charges included in the consumer's tomato dollar, grading, packing and assembly took 12.4 cents; inter-market transportation, 8.9 cents; cost of first sale in the market, 8.1 cents; and retail and wholesale margins, 39.3 cents. Of the $3.71 of marketing charges found in the retail price, the largest part or $2.12 went for wholesale and retail margins. The retail and wholesale margins include charges for ripening and repacking. Waste and spoilage caused by decay, cracks, insect damage, and bruises were found to be one of the most costly items in the ripening and repacking of green-ripe South Carolina tomatoes. Observations of a repacking operation indicated an average loss from these causes of 8 pounds per 30-pound lug.

MARKETING BRIEFS:

Cotton.--Loans on 1949-crop American-Egyptian cotton will be available this year at 90 percent of parity, the same level at which 1948 and prior crops were supported. Loans are available to producers on a nonrecourse basis through April 30, 1950. Loans are available on cotton classed as No. 5 or better in grade and 1 3/8 inches and longer in staple length with appropriate differentials to reflect differences in value resulting from quality and location.

Dairy Products.--Prices of Class II milk (milk going to all uses except fluid milk and milk drinks) paid to milk producers in the Fall River and the Lowell-Lawrence, Mass., milk-marketing areas have been brought into line with those of the Boston market, respecting the amount allowed to milk handlers for handling this milk. This was accomplished through amendments to the Federal orders regulating the handling of milk in the two areas, and is effective April 1.... Milk producers in the New Orleans milk-marketing area have been assured a minimum price of $5.56 per hundredweight for Class I milk (chiefly fluid milk and fluid cream in this market) during the months April through August.... USDA announced March 29 that it had taken emergency action to suspend a portion of the provisions for pricing Class III milk as provided in the Federal order regulating milk handling in the Cleveland milk-marketing area. (Class III milk in this area is that which goes into "surplus" milk uses such as the manufacture of condensed skim milk.) The suspension, requested by milk handlers and producers, will lower the price of skim milk paid to producers so as to encourage the utilization of larger quantities of skim milk during the coming season of heavy milk production. The price change, effective April 1, reduces by 25 cents per hundredweight the producer price for skim milk used in the manufacture of bulk condensed skim or whole milk.

Fats and Oils.--USDA is now offering a testing and certification service, on a fee basis, for determining the oil content and oil quality of flaxseed and soybeans. Testing for oil quality is for iodine number and free fatty-acid content of the oil. The testing service is additional to the grading service under the U. S. Grain Standards Act.... USDA purchases of 1948-crop flaxseed as a price-support operation by the Commodity Credit Corporation will be discontinued April 30, 1949.

Fruits.--USDA has announced purchase by the Commodity Credit Corporation of 15,825 tons of raisins from processors located in California. Included were 15,600 tons of sun-dried Thompson seedless raisins at an average price of $159.85 per ton and 225 tons of sun-dried Sultana raisins at an average of $154.98 per ton.... Georgia peach growers have favored by referendum vote a continuance of the marketing agreement and order that regulates the interstate shipment of peaches grown in Georgia. Continuance was favored by 94.5 percent, by number, of the producers voting, and by 95.8 percent, by volume, of the production represented in the voting.... California tree fruit growers have favored by referendum vote a continuance of the marketing agreement and order program reg-

ulating the handling of fresh Bartlett pears, plums, and Elberta peaches grown in California. Continuance was favored by 97.5 percent of the Bartlett pear growers voting and by 96.9 percent of the production represented in the voting. Of the plum growers voting in the referendum, 96 percent by number and 94.1 percent by volume of production represented in the voting favored continuance. Elberta peach growers voting in the referendum favored continuance by a vote of 92.5 percent by number and by volume of production represented in the voting of 93.2 percent.

Grain.--Price-support programs for 1949-crop oats, barley, and rye have been announced by USDA. For oats, support will reflect to producers a weighted average rate equal to 70 percent of the oats parity price as of April 15, 1949. For Barley and rye, it will reflect a weighted average equal to 72 percent of the barley and rye parity prices as of April 15, 1949. These rates reflect the approximate feeding value of these grains in competition with corn.... Also announced was a price-support program on 1949-crop wheat, computed on the basis of 90 percent of the wheat parity price as of July 1, 1949, the beginning of the marketing year. The program will be available to farmers from time of harvest through January 31, 1950.... Another price-support program covers 1949-crop grain sorghums. The loans and purchase agreements will be available from harvest-time through January 31, 1950. Loans will mature March 31, 1950, or earlier on demand, and holders of purchase agreements must declare in March 1950 (or earlier, if determined by the manager of CCC) their intentions to sell to CCC.... In the 8 months ending with February 1949, exports of U. S. grain and grain products totaled 11,811,000 long tons, compared with 10,902,000 long tons for the same period a year earlier.

Poultry.--On March 24, PMA urged broiler producers to review their production and marketing plans for the next few months in view of expected heavy marketings from farm flocks and uncertain storage demand for broilers during this period.

Broiler raisers, PMA said, are currently producing about 50 percent more broilers than a year ago. Despite this large increase, prices to producers have been relatively favorable, largely because of comparatively small supplies of dressed poultry in cold storage. The price situation is likely to become less favorable in coming months. USDA officials also pointed out that no price support for broilers will be available this year.

There may be an excessive market supply of chickens in the late summer, owing to the large broiler output and larger marketings of chickens from farm flocks. Farmers generally have stated their intentions to raise about 7 percent more chickens this year than last.

Tobacco.--No change in the originally announced 1949 marketing quota for flue-cured tobacco is contemplated, USDA announced in March. The original quota, proclaimed in August 1949, resulted in a total allotment of 960,623 acres, an increase of about 5 percent over 1948.

ABOUT MARKETING

The following addresses, statements, and publications, issued recently, may be obtained upon request. To order, check on this page the publications desired, detach and mail to the Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

Addresses and Statements:

Statement by Charles F. Brannan, Secretary of Agriculture, to press conference regarding significance to United States Wheat Farmers of new International Wheat Agreement, Washington D. C., March 23, 1949. 2 pp. (Processed)

Statement of Charles F. Brannan, Secretary of Agriculture, before the House Committee on Banking and Currency, on March 21, 1949, with respect to H. R. 2682, a bill to amend the CCC Charter Act and the Critical Materials Stockpiling Act. 4 pp. (Processed)

Statement of Charles F. Brannan, Secretary of Agriculture, before the Special Subcommittee of the House Agricultural Committee on March 22, 1949, with respect to corn acreage allotments and marketing quotas. (Processed)

A talk by Ralph S. Trigg, Administrator of PMA and President of CCC, USDA, at the Citrus Institute, San Bernardino, Calif., Saturday, March 19, 1949. 11 pp. (Processed)

The Fats and Oils Outlook, by George L. Prichard, Director, Fats and Oils Branch, PMA, at Urbana, Ill., March 30, 1949. 6 pp. (Processed)

Publications

Federal-State Market News Service Summaries of Weighted Average Prices Received at Eastern Auction Markets, by Varieties, by Weeks, by Markets, (1948) for: Apricots, 7 pp.; Nectarines, 9 pp.; Peaches, 13 pp.; Pears, 18 pp.; and Plums, 31 pp. (PMA) (All processed)

U. S. Standards for Grades of Fruit Preserves or Jams (CFR 7, Section 52.333) Effective March 14, 1949. (PMA) 17 pp. (Processed)

Market News Offices: Location, Commodities, Officials in Charge. PMA. March 1949. 9 pp. (Processed)

Check List for USDA Standards for Farm Products. (PMA) January 1949. 10 pp. (Processed)

Summary of Regional Cold Storage Holdings for 1948 and 1944-49, Average, by Months. (PMA) March 1949. 53 pp.

Comparative Qualities of Some Varieties of Cotton Grown at Texas Experiment Stations, Crop of 1948. (PMA in cooperation with The Agri-

cultural and Mechanical College of Texas.) March 1949. 17 pp. (Processed)

Storage for School Lunch Food and Supplies. (Bureau of Human Nutrition and Home Economics and PMA) (PA-63) March 1949. 11 pp. (Printed)

Receipts and Disposition of Livestock at 66 Public Markets, Calendar Year 1947. (PMA) 9 pp. (Processed)

Receipts and Disposition of Livestock at 66 Public Markets, Calendar Year 1948. (PMA) 9 pp. (Processed)

Tobacco Price Supports: Loans, Marketing Quotas and Acreage Allotments. (PMA) March 1949. 2 pp. (Printed)

U. S. Consumer Standards for Celery Stalks. (PMA) Effective March 27, 1949. 6 pp. (Processed)

Marketing Imperial Valley Lettuce: Summary of 1948 Season. (PMA) December 1948. pp. 24 (Processed)

Marketing Georgia Peaches: 1948 Season. (PMA) 14 pp. (Processed)

Benton Harbor Cash Market Fruit and Vegetable Summary: 1948 Season, June 1 to November 2. 3 pp. (Processed)

Wholesale Market Prices for San Francisco for Certain Fruits and Vegetables: 1948. (PMA and California Department of Agriculture) January 1948. 12 pp. (Processed)

Flexibility of Operation in Dairy Manufacturing Plants. (Circular No. 799) (PMA) September 1948. 40 pp. (Printed)

Rations Fed to Milk Cows: 1948. (Bureau of Agricultural Economics) January 1949. 24 pp. (Processed)

Feed Statistics, Including Wheat and Rye. (Bureau of Agricultural Economics) December 1948. 44 pp. (Processed)

Milk Production on Farms and Statistics of Dairy Plant Products, 1948. Bureau of Agricultural Economics) February 1949. 28 pp. (Processed)

Fruits and Nuts: Bearing Acreage 1919-1946. (Bureau of Agricultural Economics) CS-32. January 1949. 39 pp. (Processed)